Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A plating system for bone fixation for mammalian bone structures, comprising:

~~I.~~ (a) a first plate segment and a second plate segment, each of the segments adapted to be affixed onto a bone structure with another bone structure in an aligned spatial relationship; and

~~H.~~ (b) a coupler means (coupling segment) being securable to the first plate segment and the second plate segment, the coupler means adapted to enable adjustment of the length of the plating system and being selectively adjustable to ~~define~~ actively control the modular movement (compression and subsidence) of the bone structures and the plate segments attached thereto in the aligned spatial relationship while accommodating post-operative subsidence.

2. (Currently Amended) The plating system of Claim 1-wherein the coupler means has at least two elongated openings to accommodate means in engagement with the plate segments for ~~is selectively adjustable~~ selectable adjustment ~~to enable compression and subsidence~~ of the plating system to enable compression and subsidence of the bone structures in the aligned spatial relationship.

3. (Original) The plating system of Claim 1 wherein the plates are slidably engaged substantially in the aligned spatial relationship.

4. (Original) The plating system of Claim 1 wherein each of the plates has a projection portion and a receiving channel for complemental placement of the projection portion of one plate segment into the receiving channel of another plate segment.

5. (Original) The plating system of Claim 1 wherein the first plate segment has at least one projection portion and the second plate segment has at least one receiving channel to receive the projection portion of first plate segment.

6. (Original) The plating system of Claim 5 wherein the projection portion has a generally elongated body with cross-section shape selected from the shapes of a triangle, truncated triangle, rectangle, modified rectangle, and a trapezoid.

7. (Original) The plating system of Claim 1 wherein the coupler means is selectively engaged with first plate segment and the second plate segment to secure one or both the plate segments to define the movement of the bone structures in the aligned spatial relationship.

8. (Original) The plating system of Claim 1 wherein the coupler means comprises an elongated element and a plurality of fasteners for selectively engaging the plating segments.

9. (Original) The plating system of Claim 8 wherein the coupler means has an opening to receive at least one fastener passing therethrough to engage one or both of the plate segments.

10-14. (Cancelled)

15. (Original) The plating system of Claim 1 wherein the plate segments each has at least one opening to accommodate a bone screw for securing the plate segments onto the bone structures.

16. (Original) The plating system of Claim 1 wherein the plate segments each has at least one opening to receive a portion of a distraction screw implanted at a predetermined landmark of the bone structure.

17. (Original) The plating system of Claim 1 wherein the mammalian bone structure is a cancellous bone or cortical bone.

18. (Original) The plating system of Claim 1, wherein at least a portion of the plating segments is constructed of a biologically adaptable or biologically compatible material.

19. (Original) The plating system of Claim 18 wherein the biologically adaptable or biologically compatible material is selected from the group of materials consisting of stainless steel, titanium, combination metallic alloys, plastics, ceramics, osteo-conductive materials, and bio-active materials.

20. (Original) The plating system of Claim 19 wherein the osteo-conductive material is a deminerized bone matrix, a hyroxyapatite, a transforming growth factor, platelet-derived growth factor or a bone-morphogenic protein.

21. (Original) The plating system of Claim 1, wherein each of the plate segments has curved surfaces to conform to the surface contours of the bone structures.

22. (Original) The plating system of Claim 1 wherein each of the plate further comprises an end coupler adaptable to be engaged by a distraction screw.

23. (Original) The plating system of Claim 22 wherein the end coupler includes means for engagement with the distraction screw comprising interfitting threads or complemental spines.

24. (Currently Amended) A modular plating system for bone fixation for mammalian bone structures comprising:

(a) a plurality of plate segments, each of the segments adapted to be affixed onto a bone structure with another bone structure in an aligned spatial relationship; and

(b) a coupler means (coupling segment) being securable to at least two of the plate segments and adapted to enable adjustment of the length of the plating system and selectively adjustable to ~~define~~ actively control the modular movement (compression and subsidence) of the bone structures and the plate segments attached thereto in the aligned spatial relationship while accommodating post-opertive subsidence.

25-32. (Cancelled)

33. (New Claim) The plating system of Claim 8 wherein the coupler means has at least two openings to receive fasteners passing there through to engage one or both of the plate segments.

34. (New Claim) The plating system of Claim 4 wherein each of the plates has at least two receiving channels.